



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,282	02/05/2002	Richard J. Caldwell	GB 010029	7906
7590	11/21/2005		EXAMINER	
			SOL, ANTHONY M	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/067,282	CALDWELL ET AL.	
Examiner	Art Unit		
Anthony Sol	2662		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 February 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-9 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 04 April 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

1. It is suggested that the applicant insert the following section headings:

FIELD OF THE INVENTION

BACKGROUND OF THE INVENTION

BRIEF SUMMARY OF THE INVENTION

BRIEF DESCRIPTION OF THE DRAWINGS

DETAILED DESCRIPTION OF THE INVENTION

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1- 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,977,616 ("Linder").

Regarding claim 1,

Linder shows in Fig. 6 at least two antennas 64, 65 in a TDM receiver (Col. 1, lines 41-42, col. 2, 16-17; claim 1 – a station having at least two antennas).

Linder discloses that the signals received by one or the other antennas are provided to the receiver 67 for developing RSSI value for the received signal (Col. 2, lines 17-20; claim 1 - making received signal quality measurements for at least one of said at least two antennas).

Linder shows in Fig. 2a, a series of TDM time slots A and B, wherein A contains information of interest and slot B contains information not of interest to the receiver in question (Col. 2, lines 57-60; claim 1 - during at least a portion of a time division time frame in which downlink signals are addressed specifically to another station).

Linder further discloses that a comparison could then be carried out during time slots having information not of interest with respect to the antenna actually being used and a determination could then be made as to which antenna should be used for subsequent time slots containing information of interest (Col. 2, lines 65-68, col. 3, lines 1-2; claim 1 - selecting one of the said at least two antennas providing the best (or better) quality of signal reception for use).

4. Regarding claim 2,

Linder discloses a method that covers all the limitations of the parent claim.

Linder discloses that the sample and hold circuit 11 of Fig. 1 samples RSSI for an antenna during a time slot containing information of interest and a comparison could then be carried out during time slots having information not of interest with respect to the antenna actually being used (Col. 2, lines 63-68). It is known in the art that packets are broadcast in predetermined time slots (Col. 1, lines 23; claim 2 – diversity measurements are made over the duration of at least one data packet).

5. Regarding claim 3,

Linder discloses a method that covers all the limitations of the parent claim.

Linder shows in Fig. 4, that RSSI values are sampled and compared for both antennas during time slots that are not of interest, such that the decision regarding antenna selection can be made prior to receipt of a time slot of interest. It can be seen in Fig. 4 that every frame is being monitored (Col. 3, lines 51-55; claim 3 - every time frame is monitored).

6. Regarding claim 4,

Linder discloses a method that covers all the limitations of the parent claim.

Linder discloses that the clock rate should be chosen to accommodate the time slot and frame length durations of the TDM system in question (Col. 3, lines 13-16; claim 4 - assessing the changes occurring in the radio transmission and by altering the frequency of monitoring of the time frames accordingly).

7. Regarding claim 5,

Linder discloses a method that covers all the limitations of the parent claim.

Linder discloses that the sample and hold circuit 11 of Fig. 1 samples RSSI for an antenna during a time slot containing information of interest (Col. 2, lines 63-65;

claim 5 – signal quality measurements for another of said at least two antennas are made when signals are addressed specifically to the station effecting signal monitoring).

8. Regarding claims 6 and 8,

Linder shows in Fig. 6 at least two antennas 64, 65 in a TDM receiver (Col. 1, lines 41-42, col. 2, 16-17; claim 6 – one secondary station having transceiving means for receiving downlink signals and for transmitting uplink signals; claim 8 - the secondary station including transceiving means for receiving downlink signals from the primary station and for transmitting uplink signals; claim 6 – the at least one secondary station having at least two antennas; claim 8 - secondary station further comprising at least two antennas). It is inherent that a primary station exists in a system that utilizes a TDM receiver and that primary station would transmit signals on downlink and receive signals on uplink (Claim 6 – a primary station having transceiving means for transmitting signals on downlink and receiving signals on an uplink; claim 8 - a primary station having transceiving means for transmitting signals on a downlink and receiving signals on an uplink; claim 6 – the downlink and uplink signals being transmitted in accordance with a time division protocol comprising successive time frames; claim 8 - the downlink and uplink signals being transmitted in accordance with a time division protocol comprising successive time frames).

Linder discloses that the signals received by one or the other antennas are provided to the receiver 67 for developing RSSI value for the received signal (Col. 2, lines 17-20). Linder shows in Fig. 2a, a series of TDM time slots A and B, wherein A

contains information of interest and slot B contains information not of interest to the receiver in question (Col. 2, lines 57-60). Linder further discloses that a comparison could then be carried out during time slots having information not of interest with respect to the antenna actually being used and a determination could then be made as to which antenna should be used for subsequent time slots containing information of interest (Col. 2, lines 65-68, col. 3, lines 1-2; claim 6 - means for selecting one of said at least two antennas in response to antenna diversity measurements made during at least a portion of a time division time frame in which downlink signals are not addressed specifically to the secondary station; claim 8 - means for selecting one of said at least two antennas in response to antenna diversity measurements made during at least a portion of a time division time frame in which downlink signals are not addressed specifically to the secondary station).

9. Regarding claims 7 and 9,

Linder discloses a system that covers all the limitations of the parent claim.

Linder discloses that all of the antennas associated with the receiver (secondary station) are sampled during a time slot not of interest, such that the antenna selection occurs prior to receipt of a time slot of interest. It is inherent that a means for determining from broadcast packets when downlink message signals are to be sent to secondary stations not effecting diversity measurements (Col. 1, lines 49-52; claim 7 - at least one secondary station has means for determining from indications in the

downlink signals when downlink message signals are to be sent to secondary stations other than the one effecting the antenna diversity measurements; claim 9 - means for determining from indications in the downlink signals when downlink message signals are to be sent to secondary stations other than the one effecting the antenna diversity measurements).

Linder further discloses that the clock rate should be chosen to accommodate the time slot and frame length durations of the TDM system in question (Col. 3, lines 14-17; claim 7 - means for determining from the indications when there will be in the at least one time frame a time period of sufficient duration for the at least one secondary station to effect signal quality measurements; claim 9 - means for determining from the indications when there will be in the at least one time frame a time period of sufficient duration for signal quality measurements to be effected).

Linder further discloses that a comparison could then be carried out during time slots having information not of interest with respect to the antenna actually being used and a determination could then be made as to which antenna should be used for subsequent time slots containing information of interest (Col. 2, lines 65-68, col. 3, lines 1-2; claim 7 - means for comparing the quality of signal reception by each of the at least two antennas and for selecting one of the said at least two antennas providing the best (or better) quality of signal reception; claim 9 - means for comparing the quality of signal reception by each of the at least two antennas and selecting means for selecting one of the said at least two antennas providing the best (or better) quality of signal reception).

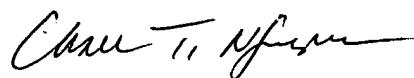
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Sol whose telephone number is (571) 272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600



Anthony Sol
Examiner
Art Unit 2662
11/15/2005